

Atty. Dkt. No. 081445-0112

**REMARKS**

Claims 1, 3 and 5-19 remain pending in this application. In the proposed amendments, independent claims 1 and 14 have both been amended to further clarify the claimed invention thereof over the cited prior art references. Applicant respectfully requests reconsideration of the rejected claims in view of the forgoing proposed amendments and the reasons which follow.

**1. Rejection of Claims 1, 3 and 5-8 Under 35 U.S.C. § 103(a) Based on Kiluk in view of Carey**

In the Office Action, claims 1, 3 and 5-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No 4,990,893 to Kiluk in view of Carey et al., "Resistance and Test-Based Outlier Rejection: Effects on Gaussian One-and Two-Sampled Inference." As explained below, the cited combination of references fails to disclose or suggest the claimed invention, particularly as amended above.

In the proposed amendments, independent claim 1 has been amended to recite that a statistical procedure (e.g., GESD) is used to identify a "set of outliers" and a "set of non-outliers" in the plurality of utility measurements, and that the performance of the system is evaluated in response to the set of outliers and set of non-outliers by calculating "how far each outlier is from a robust estimate value for utility usage determined from the set of non-outliers."

Neither Kiluk nor Carey (taken alone or in combination) discloses or suggests a method that includes all of the forgoing steps, and particularly not as recited in combination with the remaining of method claim 1. As to Kiluk, it discloses an alarm/warning system and associated method that is used for monitoring of service apartments for elderly and/or handicapped persons. The method involves creating a standard profile or curve of "normal" energy consumption data recorded over a period of time (e.g., the most recent two weeks of data). The values in the standard curve are then compared against actual energy

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consumption values that are subsequently measured and an alarm is triggered if a predefined threshold is exceeded.

In the Office Action, the Examiner concluded that the measured consumption values in Kiluk that exceed the alarm threshold are “outliers.” Assuming this is true (which Applicant disputes), Kiluk still fails to disclose or suggest the invention of claim 1 for at least the reason that Kiluk does not disclose or suggest creating a “set of outliers” and a “set of non-outliers” (i.e., the data that remains after all outliers are removed) and then evaluating performance of the system by comparing each outlier in the set of outliers to a “robust estimate value” for utility usage determined from the set of non-outliers. As explained in the prior Amendment and agreed to by the Examiner in the Final Office Action, a “robust estimate” is a value that is determined using only non-outlier data (i.e., the set of data which remains after all of the outliers have been detected and removed). In Kiluk, there is no disclosure or suggestion to compare actual energy consumption values against robust estimate values for assessing performance of the system. Instead, the actual energy consumption values measured in Kiluk are compared to a standard reference curve of values that are calculated from all energy consumption values (i.e., including what the Office Action terms “outliers”) measured during a prior time period (e.g., the prior two weeks).

Carey similarly fails to disclose or suggest creating sets of outliers and non-outliers and then evaluating performance of the system by comparing each outlier in the set of outliers to a “robust estimate value” for utility usage determined from the set of non-outliers. As to Carey, the Office Action stated:

The Examiner does maintain, however, that the invention of Carey teaches this method by determining the most extreme deviate, removing the most extreme deviate, and recalculating to determine a new most extreme deviate using the smaller set of samples. Carey then teaches repeating this process until all of the extreme deviates are removed, each time using mean and standard deviation estimates based on sample sets with the extreme deviates removed (i.e., robust mean and standard deviation values).

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(Office Action, page 8). Assuming it is true (which Applicant disputes) that Carey does inherently or necessarily disclose calculating robust mean and standard deviation values during the iterative process of performing the GESD statistical procedure, this still is not a disclosure or suggestion to perform the step of calculating how far "each outlier" is from a "robust estimate" value, as required by claim 1. This distinction is best understood from the flowchart in Figure 5 of the present application. In the embodiment illustrated in Figure 5, the iterative GESD method disclosed in Carey corresponds generally to logic blocks 42-58 of the logic flow diagram. By contrast, the step of assessing performance of the system by calculating how far each outlier is from a robust estimate value of utility usage (as recited by claim 1) corresponds to steps 62-66 in the logic flow diagram. There is simply no equivalent disclosure, suggestion or teaching in either Carey or Kiluk to use the outliers and non-outliers in this manner to assess performance of the system.

In view of the foregoing differences between Kiluk in view of Carey and independent claim 1, it is respectfully submitted that the rejection of claim 1 would be overcome by entry of the forgoing amendments. Additionally, claims 3 and 5-8 variously depend from claim 1 and would thus be patentable over the applied combination of references for at least the same reasons. Accordingly, Applicant respectfully requests entry of the forgoing amendments and that the rejection of claims 1, 3 and 5-8 under 35 U.S.C. § 103(a) as being unpatentable over Kiluk in view of Carey be withdrawn.

**2. Rejection of Claims 9-18 Under 35 U.S.C. § 103(a) Based on Kiluk in View of Carey and Further in View of Sematech**

In the Office Action, claims 9-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kiluk and Carey (as applied to claims 1-8 above) and further in view of Sematech, "The Engineers Statistical Internet (ESI) Handbook: Grubbs' Test for Outliers."

The inventions of claims 9-13 are patentable over the cited combination for at least the reason that these claims all depend from claim 1. As noted above, the combination of Kiluk in view of Carey fails to disclose or suggest the invention of claim 1, particularly with

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the proposed amendments. It follows that claims 9-13 are also patentable over Kiluk in view of Carey and further in view of Sematech because the latter fails to make up the above-noted deficiencies in Kiluk in view of Carey.

The remaining claims include independent claim 14 and dependent claims 15-18. Claim 14 has been amended similarly to claim 1 and upon entry of the amendment is patentable over Kiluk in view of Carey and further in view of Sematech for at least the same reasons as provided above. Hence, claim 14 and dependent claims 15-18 are all patentable over the cited combination of references for at least the same reasons as provided above.

Accordingly, Applicant respectfully requests that the forgoing amendments be entered and that the rejection of claims 9-18 under 35 U.S.C. § 103(a) as being unpatentable over Kiluk in view of Carey and further in view of Sematech be withdrawn.

**3. Rejection of Claim 19 Under 35 U.S.C. § 103(a) Based on Kiluk in View of Carey and Sematech and Further in View of Jensen**

In the Office Action, claim 19 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kiluk in view of Carey and Sematech and further in view of U.S. Patent No. 5,555,195, to Jensen et al.

The invention of claim 19 is patentable over the cited combination for at least the reason that this claims depends from claim 14. As noted above, the combination of Kiluk in view of Carey and Sematech fails to disclose or suggest the invention of claim 14 as amended, and Jensen fails to make up for the deficiencies. Hence, it follows that claim 19 is patentable over Kiluk in view of Carey and Sematech and further in view of Jensen.

Accordingly, Applicant respectfully requests that the forgoing amendments be entered and that the rejection of claim 19 under 35 U.S.C. § 103(a) as being unpatentable over Kiluk in view of Carey and Sematech and further in view of Jensen be withdrawn.

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**4. Conclusion**

Applicant believes the forgoing amendments would place the present application in condition for allowance. Hence, entry of the forgoing amendments and favorable reconsideration of the application as amended is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1447. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1447. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 06-1447.

Respectfully submitted,

Date \_\_\_\_\_ By \_\_\_\_\_

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